Sugiyama 10 527 692 = WT-1 peptides in water/oil emulsion

```
LOGINID:SSPTAHPY1654

* * * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 16:59:46 ON 12 MAR 2007

=> file registry

FILE 'REGISTRY' ENTERED AT 17:00:01 ON 12 MAR 2007


=> s CYTWNQMNL/sqsp
L1            1 CYTWNQMNL/SQSP

=> file CAPLUS

FILE 'CAPLUS' ENTERED AT 17:00:56 ON 12 MAR 2007

=> s L1 and PATENT/dt
             12 L1
        5633762 PATENT/DT
L2            9 L1 AND PATENT/DT

=> dup rem L2
PROCESSING COMPLETED FOR L2
L3            9 DUP REM L2 (0 DUPLICATES REMOVED)

=> d L3 1-9 bib abs

L3   ANSWER 1 OF 9  CAPLUS  COPYRIGHT 2007 ACS on STN
AN   2005:429563  CAPLUS
DN   142:462274
TI   WT1-origin HLA-DR-binding antigen peptide as helper T cell-inducing and
     cancer vaccine boosting agent
IN   Sugiyama, Haruo
PA   Japan
SO   PCT Int. Appl., 72 pp.
     CODEN: PIXXD2
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    -------------------    --------
PI   WO 2005045027        A1    20050519    WO 2004-JP16336        20041104
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,

             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

     CA 2544214           A1    20050519    CA 2004-2544214        20041104
     EP 1696027           A1    20060830    EP 2004-799497         20041104
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS
     CN 1902313           A     20070124    CN 2004-80039886       20041104
PRAI JP 2003-375603       A     20031105
     WO 2004-JP16336      W     20041104
AB   This invention provides a WT1-origin HLA-DRB1*0405-binding antigen
     peptide; a polynucleotide encoding this peptide; a helper T cell-inducing
     agent contg. the peptide or the polynucleotide.  A peptide which is a
     partial peptide comprising from 10 to 25 consecutive amino acids in the
     human WT1 amino acid sequence represented by SEQ ID NO:1 and binding to
     HLA-DRB1*0405 to induce helper T cells; a encoding polynucleotide; a
```

helper T cell-inducing agent contg. the peptide or the polynucleotide; are provided. The Wilms' tumor gene WT1 is overexpressed in most types of leukemias and various kinds of solid tumors, including lung and breast cancer, and participates in leukemogenesis and tumorigenesis. WT1 protein has been reported to be a promising tumor antigen in mouse and human. In the present study, a HLA-DRB1*0405-binding 16-mer WT1 peptide (a.a. 332-347) was found. The 16-mer WT1 peptide elicited WT1-specific cytotoxic T lymphocytes (CTL) effectively. WT1332-347 peptide induced differentiation and activation of CD4-pos. T lymphocytes into Th-1 type. Besides HLA-DRB1*0405, binding to HLA-DRB1*1502 was also obsd., showing that WT1332-347 is a promiscuous helper peptide. The results showed that this 16-mer WT1 peptide was immunogenic for the induction of WT1-specific CTL. Therefore, cancer immunotherapy using this 16-mer WT1 peptide as vaccine boosting agent should provide efficacious treatment for HLA-DRB1*0405-pos. patients with tumors.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:14590 CAPLUS
DN 142:112410
TI Method for selecting WT1 vaccine adaptive patient
IN Sugiyama, Haruo
PA Japan
SO PCT Int. Appl., 65 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005001117	A1	20050106	WO 2004-JP9378	20040625
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	CA 2530184	A1	20050106	CA 2004-2530184	20040625
	EP 1640458	A1	20060329	EP 2004-746847	20040625
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	CN 1842603	A	20061004	CN 2004-80024559	20040625
PRAI	JP 2003-184436	A	20030627		
	JP 2004-70497	A	20040312		
	WO 2004-JP9378	W	20040625		

AB A method is provided for selecting a patient with a high WT1 vaccine responsiveness using the frequency of WT1-specific CTL precursor cells as an index. Also provided is a clin. test reagent used for the method. The method comprises a process (a) for isolating a biosample contg. CTL precursor cells from a subject patient; a process (b) for measuring the existence frequency or quantity of WT1-specific CTL precursor cells present in the biosample isolated in the process (a); and a process (c) for evaluating whether or not the measurement result in the process (b) is high as compared with those of healthy persons, and judging the responsiveness to WT1 vaccine.

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:610132 CAPLUS
DN 141:156095
TI Tumor antigen-derived dimerized peptides for use as vaccine against cancer
IN Takasu, Hideo; Samizo, Fumio
PA Sugiyama, Haruo, Japan; Chugai Seiyaku Kabushiki Kaisha; Sumitomo

Pharmaceuticals Company, Limited
SO PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004063217	A1	20040729	WO 2004-JP254	20040115
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ				
	AU 2004204031	A1	20040729	AU 2004-204031	20040115
	CA 2513701	A1	20040729	CA 2004-2513701	20040115
	EP 1584627	A1	20051012	EP 2004-702444	20040115
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	BR 2004006800	A	20060117	BR 2004-6800	20040115
	CN 1756763	A	20060405	CN 2004-80005847	20040115
	US 2006217297	A1	20060928	US 2005-541821	20050711
PRAI	JP 2003-7122	A	20030115		
	WO 2004-JP254	W	20040115		

AB Provided are cancer vaccine comprising tumor antigen-derived peptides (7-30 amino acid residues) dimerized through disulfide bond. The monomeric peptide of the dimerized cancer vaccine peptides are derived from human tumor antigen such as tumor suppressor gene product WT1.

L3 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:267353 CAPLUS
DN 140:286149
TI Modified peptide derived from mouse WT1 tumor antigen for use as cancer vaccine
IN Sugiyama, Haruo; Gotoh, Masashi; Takasu, Hideo; Samizo, Fumio; Kusunose, Naoto; Nakatsuka, Masashi
PA Chugai Seiyaku Kabushiki Kaisha, Japan; Sumitomo Pharmaceuticals Company, Limited
SO PCT Int. Appl., 65 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004026897	A1	20040401	WO 2003-JP11974	20030919
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	AU 2003264514	A1	20040408	AU 2003-264514	20030919
	EP 1548028	A1	20050629	EP 2003-797688	20030919
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	US 2006205667	A1	20060914	US 2005-528360	20050318
PRAI	JP 2002-275264	A	20020920		
	WO 2003-JP11974	W	20030919		

AB Disclosed is a cancer antigen peptide derived from mouse WT1 tumor antigen having a cysteine residue substituted, contg. the following amino acid sequence X-Y-Thr-Trp-Asn-Gln-Met-Asn-Leu (SEQ ID NO:4) wherein X represents Ser, Ala, Abu, Arg, Lys, Orn, Cit, Leu, Phe or Asn; and Y represents Tyr or Met; antigen presenting cells displaying complexes of those peptides and HLA-A24 antigen; cytotoxic T lymphocytes (CTL) recognizing the complex; and use as cancer vaccine. In the present study,

substitution, were introduced into the first anchor motif at position 2 of the natural immunogenic HLA-A*2402-restricted 9-mer WT1 peptide (CMTWNQMNL; a.a. 235-243) or its deriv. with M.fwdarw.Y substitution. Those peptides showed antigenicity comparable to that of the wild type.
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:252362 CAPLUS
DN 140:286143
TI Cancer vaccine preparations comprising antigen HLA-A24-restricted WT-1 protein epitopes and adjuvant in water-in-oil emulsion
IN Sugiyama, Haruo
PA Japan
SO PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004024175	A1	20040325	WO 2003-JP11675	20030912
	TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	AU 2003262094	A1	20040430	AU 2003-262094	20030912
	EP 1550453	A1	20050706	EP 2003-795414	20030912
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	US 2007036808	A1	20070215	US 2005-527692	20050311
PRAI	JP 2002-266876	A	20020912		
	WO 2003-JP11675	W	20030912		

AB It is intended to provide WT1-origin cancer antigen peptides which are useful in vivo, in particular, in the clin. field and an administration dosage form of these cancer antigen peptides as a vaccine for cancer. Namely, a water-in-oil type emulsion contg., as the active ingredient(s), one or both of a peptide having the amino acid sequence Cys Met Thr Trp Asn Gln Met Asn Leu (SEQ ID NO:2) and another peptide having the amino acid sequence Cys Tyr Thr Trp Asn Gln Met Asn Leu (SEQ ID NO:3), and a process for producing the same.
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:282423 CAPLUS
DN 138:297644
TI Novel method of inducing antigen-specific T cells
IN Sugiyama, Haruo; Azuma, Ichiro
PA Japan
SO PCT Int. Appl., 50 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003028758	A1	20030410	WO 2002-JP9997	20020927
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	EP 1447092	A1	20040818	EP 2002-800255	20020927
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
US 2005002951 A1 20050106 US 2004-490865 20040617
PRAI JP 2001-301224 A 20010928
WO 2002-JP9997 W 20020927
AB It is intended to provide a novel method of inducing antigen-specific T cells. Namely, a method of inducing antigen-specific T cells in a patient with a need therefor by administering to the patient (a) a compn. contg. as the active ingredient an antigen protein or an antigen peptide and (b) a compn. contg. as the active ingredient a bovine tubercle bacillus BCG-strain cell wall skeleton (BCG-CWS). characterized in that the compn. (b) is first administered and then the compn. (a) is administered; and medicinal compns. relating thereto.
RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:282422 CAPLUS
DN 138:297643
TI Novel method of inducing antigen-specific T cells
IN Sugiyama, Haruo
PA Japan
SO PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003028757	A1	20030410	WO 2002-JP9993	20020927
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
EP 1447091	A1	20040818	EP 2002-800016	20020927
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
US 2004247609	A1	20041209	US 2004-490873	20040617
PRAI JP 2001-301206	A	20010928		
WO 2002-JP9993	W	20020927		

AB It is intended to provide a novel method of inducing antigen-specific T cells. Namely, a method of inducing antigen-specific T cells in a patient with a need therefor by administering to the patient (a) a compn. contg. as the active ingredient an antigen protein or an antigen peptide and (b) a compn. contg. as the active ingredient a non-specific immunopotentiator, characterized in that the compn. (b) is first administered and then the compn. (a) is administered; and medicinal compns. relating thereto.
RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:22706 CAPLUS
DN 138:88638
TI Cancer vaccine containing cancer antigen based on tumor suppressor gene WT1 product and cationic liposomes
IN Mayumi, Tadanori; Sugiyama, Haruo; Ohsugi, Yoshiyuki
PA Chugai Seiyaku Kabushiki Kaisha, Japan; Chugai Pharmaceutical Co., Ltd.
SO PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

```
PI   WO 2003002142        A1    20030109    WO 2002-JP6597         20020628
     WO 2003002142        A8    20031211
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,

             UG, US, UZ, VN, YU, ZA, ZM, ZW

     CA 2451846           A1    20030109    CA 2002-2451846        20020628
     EP 1410804           A1    20040421    EP 2002-738876         20020628
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     CN 1520311           A     20040811    CN 2002-812693         20020628
     US 2006165708        A1    20060727    US 2003-482327         20031229
PRAI JP 2001-199449       A     20010629
     WO 2002-JP6597       W     20020628
AB   Provided is a cancer vaccine contg. a cancer antigen comprising as the
     active ingredient a tumor suppressor gene WT1 product or its peptide
     fragment and cationic liposomes.
RE.CNT  3     THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3   ANSWER 9 OF 9  CAPLUS  COPYRIGHT 2007 ACS on STN
AN   2002:777984  CAPLUS
DN   137:293535
TI   Modified peptide derived from mouse WT1 tumor antigen for use as cancer
     vaccine
IN   Sugiyama, Haruo
PA   Japan
SO   PCT Int. Appl., 30 pp.
     CODEN: PIXXD2
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.           KIND   DATE        APPLICATION NO.        DATE
     ---------------      ----   --------    --------------------   --------
PI   WO 2002079253        A1     20021010    WO 2002-JP2794         20020322
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,

             UG, US, UZ, VN, YU, ZA, ZM, ZW

     CA 2440303           A1     20021010    CA 2002-2440303        20020322
     EP 1371664           A1     20031217    EP 2002-708646         20020322
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     BR 2002008183        A      20040302    BR 2002-8183           20020322
     CN 1531553           A      20040922    CN 2002-807025         20020322
     JP 3728439           B2     20051221    JP 2002-577877         20020322
     US 2004097703        A1     20040520    US 2003-471835         20030915
     JP 2006034296        A      20060209    JP 2005-229180         20050808
     JP 3819930           B2     20060913
PRAI JP 2001-83250        A      20010322
     JP 2002-577877       A3     20020322
     WO 2002-JP2794       W      20020322
AB   Disclosed is a cancer antigen peptide contg. the following amino acid
     sequence Cys-Tyr-Thr-Trp-Asn-Gln-Met-Asn-Leu (SEQ ID NO:3); a vaccine for
     cancer contg. the same as the active ingredient; and a DNA vaccine contg.
     a DNA encoding this peptide as the active ingredient.
RE.CNT  25    THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT


=> file stnguide

FILE 'STNGUIDE' ENTERED AT 17:04:16 ON 12 MAR 2007
```

```
=> file biosis embase medline

FILE 'BIOSIS' ENTERED AT 17:05:08 ON 12 MAR 2007
Copyright (c) 2007 The Thomson Corporation

FILE 'EMBASE' ENTERED AT 17:05:08 ON 12 MAR 2007
Copyright (c) 2007 Elsevier B.V. All rights reserved.

FILE 'MEDLINE' ENTERED AT 17:05:08 ON 12 MAR 2007

=> s L3
L4            0 L3

=> s L1
L5            0 L1

=> file stnguide
FILE 'STNGUIDE' ENTERED AT 17:06:11 ON 12 MAR 2007
```

Sugiyama 10 527 692 = WT-1 peptides in water/oil emulsion

```
LOGINID:SSPTAHPY1654

* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 16:59:46 ON 12 MAR 2007

=> file registry

FILE 'REGISTRY' ENTERED AT 17:00:01 ON 12 MAR 2007


=> s CYTWNQMNL/sqsp
L1            1 CYTWNQMNL/SQSP

=> file CAPLUS
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    30.25      30.46

FILE 'CAPLUS' ENTERED AT 17:00:56 ON 12 MAR 2007

=> s L1 and PATENT/dt
            12 L1
       5633762 PATENT/DT
L2            9 L1 AND PATENT/DT

=> dup rem L2
PROCESSING COMPLETED FOR L2
L3            9 DUP REM L2 (0 DUPLICATES REMOVED)

=> d L3 1-9 bib abs

L3   ANSWER 1 OF 9  CAPLUS  COPYRIGHT 2007 ACS on STN
AN   2005:429563  CAPLUS
DN   142:462274
TI   WT1-origin HLA-DR-binding antigen peptide as helper T cell-inducing and
     cancer vaccine boosting agent
IN   Sugiyama, Haruo
PA   Japan
SO   PCT Int. Appl., 72 pp.
     CODEN: PIXXD2
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    --------------------   --------
PI   WO 2005045027        A1    20050519    WO 2004-JP16336        20041104
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO,
             SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
             NE, SN, TD, TG
     CA 2544214           A1    20050519    CA 2004-2544214        20041104
     EP 1696027           A1    20060830    EP 2004-799497         20041104
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
```

IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS

	CN 1902313	A	20070124	CN 2004-80039886	20041104
PRAI	JP 2003-375603	A	20031105		
	WO 2004-JP16336	W	20041104		

AB This invention provides a WT1-origin HLA-DRB1*0405-binding antigen peptide; a polynucleotide encoding this peptide; a helper T cell-inducing agent contg. the peptide or the polynucleotide. A peptide which is a partial peptide comprising from 10 to 25 consecutive amino acids in the human WT1 amino acid sequence represented by SEQ ID NO:1 and binding to HLA-DRB1*0405 to induce helper T cells; a encoding polynucleotide; a helper T cell-inducing agent contg. the peptide or the polynucleotide; are provided. The Wilms' tumor gene WT1 is overexpressed in most types of leukemias and various kinds of solid tumors, including lung and breast cancer, and participates in leukemogenesis and tumorigenesis. WT1 protein has been reported to be a promising tumor antigen in mouse and human. In the present study, a HLA-DRB1*0405-binding 16-mer WT1 peptide (a.a. 332-347) was found. The 16-mer WT1 peptide elicited WT1-specific cytotoxic T lymphocytes (CTL) effectively. WT1332-347 peptide induced differentiation and activation of CD4-pos. T lymphocytes into Th-1 type. Besides HLA-DRB1*0405, binding to HLA-DRB1*1502 was also obsd., showing that WT1332-347 is a promiscuous helper peptide. The results showed that this 16-mer WT1 peptide was immunogenic for the induction of WT1-specific CTL. Therefore, cancer immunotherapy using this 16-mer WT1 peptide as vaccine boosting agent should provide efficacious treatment for HLA-DRB1*0405-pos. patients with tumors.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:14590 CAPLUS
DN 142:112410
TI Method for selecting WT1 vaccine adaptive patient
IN Sugiyama, Haruo
PA Japan
SO PCT Int. Appl., 65 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005001117	A1	20050106	WO 2004-JP9378	20040625
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2530184	A1	20050106	CA 2004-2530184	20040625
	EP 1640458	A1	20060329	EP 2004-746847	20040625
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	CN 1842603	A	20061004	CN 2004-80024559	20040625
PRAI	JP 2003-184436	A	20030627		
	JP 2004-70497	A	20040312		
	WO 2004-JP9378	W	20040625		

AB A method is provided for selecting a patient with a high WT1 vaccine responsiveness using the frequency of WT1-specific CTL precursor cells as

an index. Also provided is a clin. test reagent used for the method. The method comprises a process (a) for isolating a biosample contg. CTL precursor cells from a subject patient; a process (b) for measuring the existence frequency or quantity of WT1-specific CTL precursor cells present in the biosample isolated in the process (a); and a process (c) for evaluating whether or not the measurement result in the process (b) is high as compared with those of healthy persons, and judging the responsiveness to WT1 vaccine.

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:610132 CAPLUS
DN 141:156095
TI Tumor antigen-derived dimerized peptides for use as vaccine against cancer
IN Takasu, Hideo; Samizo, Fumio
PA Sugiyama, Haruo, Japan; Chugai Seiyaku Kabushiki Kaisha; Sumitomo Pharmaceuticals Company, Limited
SO PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004063217	A1	20040729	WO 2004-JP254	20040115
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ				
	AU 2004204031	A1	20040729	AU 2004-204031	20040115
	CA 2513701	A1	20040729	CA 2004-2513701	20040115
	EP 1584627	A1	20051012	EP 2004-702444	20040115
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	BR 2004006800	A	20060117	BR 2004-6800	20040115
	CN 1756763	A	20060405	CN 2004-80005847	20040115
	US 2006217297	A1	20060928	US 2005-541821	20050711
PRAI	JP 2003-7122	A	20030115		
	WO 2004-JP254	W	20040115		

AB Provided are cancer vaccine comprising tumor antigen-derived peptides (7-30 amino acid residues) dimerized through disulfide bond. The monomeric peptide of the dimerized cancer vaccine peptides are derived from human tumor antigen such as tumor suppressor gene product WT1.

L3 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:267353 CAPLUS
DN 140:286149
TI Modified peptide derived from mouse WT1 tumor antigen for use as cancer vaccine
IN Sugiyama, Haruo; Gotoh, Masashi; Takasu, Hideo; Samizo, Fumio; Kusunose, Naoto; Nakatsuka, Masashi
PA Chugai Seiyaku Kabushiki Kaisha, Japan; Sumitomo Pharmaceuticals Company, Limited
SO PCT Int. Appl., 65 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004026897	A1	20040401	WO 2003-JP11974	20030919
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

	AU 2003264514	A1	20040408	AU 2003-264514	20030919
	EP 1548028	A1	20050629	EP 2003-797688	20030919
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	US 2006205667	A1	20060914	US 2005-528360	20050318
PRAI	JP 2002-275264	A	20020920		
	WO 2003-JP11974	W	20030919		

AB Disclosed is a cancer antigen peptide derived from mouse WT1 tumor antigen having a cysteine residue substituted, contg. the following amino acid sequence X-Y-Thr-Trp-Asn-Gln-Met-Asn-Leu (SEQ ID NO:4) wherein X represents Ser, Ala, Abu, Arg, Lys, Orn, Cit, Leu, Phe or Asn; and Y represents Tyr or Met; antigen presenting cells displaying complexes of those peptides and HLA-A24 antigen; cytotoxic T lymphocytes (CTL) recognizing the complex; and use as cancer vaccine. In the present study, substitution, were introduced into the first anchor motif at position 2 of the natural immunogenic HLA-A*2402-restricted 9-mer WT1 peptide (CMTWNQMNL; a.a. 235-243) or its deriv. with M.fwdarw.Y substitution. Those peptides showed antigenicity comparable to that of the wild type.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:252362 CAPLUS
DN 140:286143
TI Cancer vaccine preparations comprising antigen HLA-A24-restricted WT-1 protein epitopes and adjuvant in water-in-oil emulsion
IN Sugiyama, Haruo
PA Japan
SO PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004024175	A1	20040325	WO 2003-JP11675	20030912
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003262094	A1	20040430	AU 2003-262094	20030912
	EP 1550453	A1	20050706	EP 2003-795414	20030912
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	US 2007036808	A1	20070215	US 2005-527692	20050311
PRAI	JP 2002-266876	A	20020912		
	WO 2003-JP11675	W	20030912		

AB It is intended to provide WT1-origin cancer antigen peptides which are

useful in vivo, in particular, in the clin. field and an administration dosage form of these cancer antigen peptides as a vaccine for cancer. Namely, a water-in-oil type emulsion contg., as the active ingredient(s), one or both of a peptide having the amino acid sequence Cys Met Thr Trp Asn Gln Met Asn Leu (SEQ ID NO:2) and another peptide having the amino acid sequence Cys Tyr Thr Trp Asn Gln Met Asn Leu (SEQ ID NO:3), and a process for producing the same.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:282423 CAPLUS
DN 138:297644
TI Novel method of inducing antigen-specific T cells
IN Sugiyama, Haruo; Azuma, Ichiro
PA Japan
SO PCT Int. Appl., 50 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003028758	A1	20030410	WO 2002-JP9997	20020927
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1447092	A1	20040818	EP 2002-800255	20020927
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	US 2005002951	A1	20050106	US 2004-490865	20040617
PRAI	JP 2001-301224	A	20010928		
	WO 2002-JP9997	W	20020927		

AB It is intended to provide a novel method of inducing antigen-specific T cells. Namely, a method of inducing antigen-specific T cells in a patient with a need therefor by administering to the patient (a) a compn. contg. as the active ingredient an antigen protein or an antigen peptide and (b) a compn. contg. as the active ingredient a bovine tubercle bacillus BCG-strain cell wall skeleton (BCG-CWS). characterized in that the compn. (b) is first administered and then the compn. (a) is administered; and medicinal compns. relating thereto.

RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:282422 CAPLUS
DN 138:297643
TI Novel method of inducing antigen-specific T cells
IN Sugiyama, Haruo
PA Japan
SO PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	WO 2003028757	A1	20030410	WO 2002-JP9993	20020927
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1447091	A1	20040818	EP 2002-800016	20020927
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	US 2004247609	A1	20041209	US 2004-490873	20040617
PRAI	JP 2001-301206	A	20010928		
	WO 2002-JP9993	W	20020927		

AB It is intended to provide a novel method of inducing antigen-specific T cells. Namely, a method of inducing antigen-specific T cells in a patient with a need therefor by administering to the patient (a) a compn. contg. as the active ingredient an antigen protein or an antigen peptide and (b) a compn. contg. as the active ingredient a non-specific immunopotentiator, characterized in that the compn. (b) is first administered and then the compn. (a) is administered; and medicinal compns. relating thereto.

RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:22706 CAPLUS
DN 138:88638
TI Cancer vaccine containing cancer antigen based on tumor suppressor gene WT1 product and cationic liposomes
IN Mayumi, Tadanori; Sugiyama, Haruo; Ohsugi, Yoshiyuki
PA Chugai Seiyaku Kabushiki Kaisha, Japan; Chugai Pharmaceutical Co., Ltd.
SO PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003002142	A1	20030109	WO 2002-JP6597	20020628
	WO 2003002142	A8	20031211		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2451846	A1	20030109	CA 2002-2451846	20020628
	EP 1410804	A1	20040421	EP 2002-738876	20020628
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	CN 1520311	A	20040811	CN 2002-812693	20020628
	US 2006165708	A1	20060727	US 2003-482327	20031229
PRAI	JP 2001-199449	A	20010629		
	WO 2002-JP6597	W	20020628		

AB Provided is a cancer vaccine contg. a cancer antigen comprising as the

active ingredient a tumor suppressor gene WT1 product or its peptide fragment and cationic liposomes.
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2002:777984 CAPLUS
DN 137:293535
TI Modified peptide derived from mouse WT1 tumor antigen for use as cancer vaccine
IN Sugiyama, Haruo
PA Japan
SO PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002079253	A1	20021010	WO 2002-JP2794	20020322
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2440303	A1	20021010	CA 2002-2440303	20020322
	EP 1371664	A1	20031217	EP 2002-708646	20020322
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	BR 2002008183	A	20040302	BR 2002-8183	20020322
	CN 1531553	A	20040922	CN 2002-807025	20020322
	JP 3728439	B2	20051221	JP 2002-577877	20020322
	US 2004097703	A1	20040520	US 2003-471835	20030915
	JP 2006034296	A	20060209	JP 2005-229180	20050808
	JP 3819930	B2	20060913		
PRAI	JP 2001-83250	A	20010322		
	JP 2002-577877	A3	20020322		
	WO 2002-JP2794	W	20020322		

AB Disclosed is a cancer antigen peptide contg. the following amino acid sequence Cys-Tyr-Thr-Trp-Asn-Gln-Met-Asn-Leu (SEQ ID NO:3); a vaccine for cancer contg. the same as the active ingredient; and a DNA vaccine contg. a DNA encoding this peptide as the active ingredient.
RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> file stnguide

FILE 'STNGUIDE' ENTERED AT 17:04:16 ON 12 MAR 2007

=> file biosis embase medline

FILE 'BIOSIS' ENTERED AT 17:05:08 ON 12 MAR 2007
Copyright (c) 2007 The Thomson Corporation

FILE 'EMBASE' ENTERED AT 17:05:08 ON 12 MAR 2007
Copyright (c) 2007 Elsevier B.V. All rights reserved.

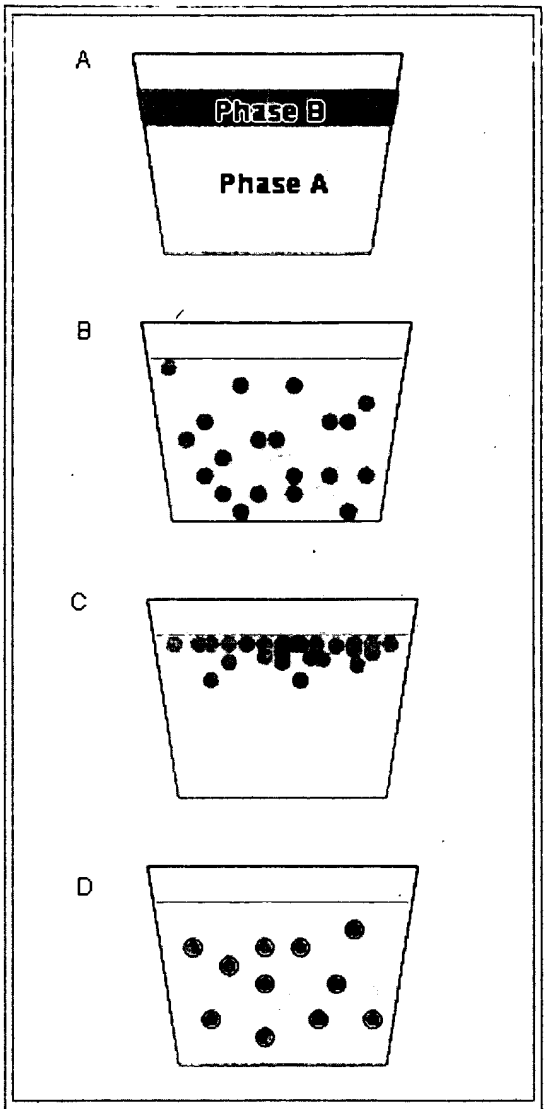
FILE 'MEDLINE' ENTERED AT 17:05:08 ON 12 MAR 2007

```
=> s L3
L4            0 L3

=> s L1
L5            0 L1

=> file stnguide
FILE 'STNGUIDE' ENTERED AT 17:06:11 ON 12 MAR 2007
```

Emulsion

From Wikipedia, the free encyclopedia

An **emulsion** is a mixture of two immiscible (unblendable) substances. One substance (the dispersed phase) is dispersed in the other (the continuous phase). Examples of emulsions include butter and margarine, espresso, mayonnaise, the photo-sensitive side of photographic film, and cutting fluid for metalworking. In butter and margarine, a continuous liquid phase surrounds droplets of water (water-in-oil emulsion). Emulsification is the process by which emulsions are prepared.



A. Two immiscible liquids, not emulsified; B. An emulsion of Phase B dispersed in Phase A; C. The unstable emulsion progressively separates; D. The surfactant (purple outline) positions itself on the interfaces between Phase A and Phase B, stabilizing the emulsion

Emulsions tend to have a cloudy appearance, because the many phase interfaces (the boundary between the phases is called the interface) scatter light that passes through the emulsion. Emulsions are unstable and thus do not form spontaneously. Energy input through shaking, stirring, homogenizers, or spray processes are needed to form an emulsion. Over time, emulsions tend to revert to the stable state of oil separated from water. Surface active substances (surfactants) can increase the kinetic stability of emulsions greatly so that, once formed, the emulsion does not change significantly over years of storage. Homemade oil and vinegar salad dressing is an example of an unstable emulsion that will quickly separate unless shaken continuously. This phenomenon is called coalescence, and happens when small droplets recombine to form bigger ones. Fluid emulsions can also suffer from creaming, the migration of one of the substances to the top of the emulsion under the influence of buoyancy or centripetal force when a centrifuge is used.

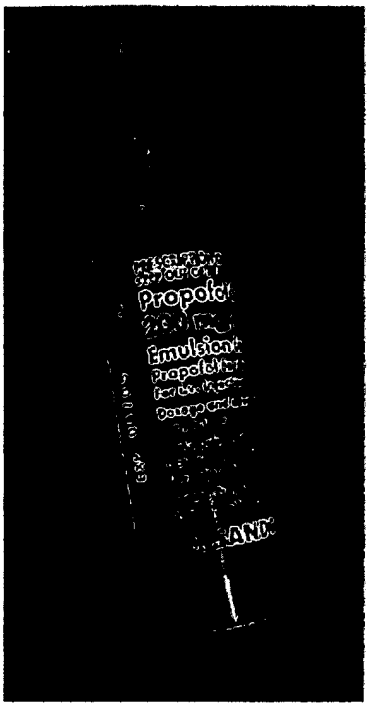
Emulsions are part of a more general class of two-phase systems of matter called colloids. Although the terms colloid and emulsion are sometimes used interchangeably, emulsion tends to imply that both the dispersed and the continuous phase are liquid.

There are three types of emulsion instability: flocculation, where the particles form clumps; creaming, where the particles concentrate towards the surface of the mixture while staying separated; and breaking, where the particles coalesce and form a layer of liquid.

Emulsifier

An **emulsifier** (also known as an **emulgent** or **surfactant**) is a substance which stabilizes an emulsion.

Examples of food emulsifiers are egg yolk (where the main emulsifying chemical is the phospholipid lecithin), and mustard, where a variety of chemicals in the mucilage surrounding the seed hull act as emulsifiers; proteins and low-molecular weight emulsifiers are common as well. In some cases, particles can stabilise emulsions as well through a mechanism called Pickering stabilization. Both mayonnaise and hollandaise sauce are oil-in-water emulsions stabilized with egg yolk lecithin. Detergents are another class of surfactant, and will chemically interact with both oil and water, thus stabilising the interface between oil or water droplets in suspension. This principle is exploited in soap to remove grease for the purpose of cleaning. A wide variety of emulsifiers are used in pharmacy to prepare emulsions such as creams and lotions.



20 ml ampule of 1% propofol emulsion suitable for intravenous injection. The manufacturers emulsify the lipid soluble propofol in a mixture of water, soy oil and egg lecithin.

Whether an emulsion turns into a water-in-oil emulsion or an oil-in-water emulsion depends on the volume fraction of both phases and on the type of emulsifier. Generally, the Bancroft rule applies: emulsifiers and emulsifying particles tend to promote dispersion of the phase in which they do not dissolve very well; for example, proteins dissolve better in water than in oil and so tend to form oil-in-water emulsions (that is they promote the dispersion of oil droplets throughout a continuous phase of water).

External links

- Microfluidic Production of Monodispersed Submicron EmulsionsThrough Filtration and Sorting of Satellite Drops 2005-652 (http://logikbase.com/website/techprofile.cfm?licid=1084)
- Video images of the process of membrane emulsification (http://www.micropore.co.uk/emulsion_video.html)
- Video image of monodisperse droplets produced by membrane emulsification (http://www.nanomi.nl/Downloads/droplets.wmv)

Retrieved from "http://en.wikipedia.org/wiki/Emulsion"

Categories: Colloidal chemistry | Food science | Soft matter | Matter